NewsRelease

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NASA LANGLEY PLANE CHOSEN AS MARS CANDIDATE

NASA selected a Langley Research Center proposal today as one of four candidates for the 2007 "Scout" mission in the agency's Mars Exploration Program.

The Aerial Regional-scale Environmental Survey (ARES) program is centered on a NASA Langley aircraft that may one day soar over the red planet returning unique science knowledge about the Mars atmosphere, surface, interior and early climate.

"From its unique vantage point one mile above the Mars surface, ARES will return significant and previously unobtainable scientific measurements," said Langley's Dr. Joel S. Levine, ARES principal investigator. "ARES complements and extends the measurements available from previous Mars missions. The data will be profound and inspiring."

Following detailed mission-concept studies, due for submission by July 2003, NASA intends to select one of the mission proposals by August 2, 2003, for full development as the first Mars Scout mission. The mission developed for flight will be launched in 2007.

"ARES will obtain the first direct measurement of water vapor and chemically active gas concentrations in the near-surface atmosphere," added Levine. "These measurements are critically important for our understanding of past or present life and of the chemical coupling between the Mars atmosphere and surface."

The selected proposals were judged to have the highest science value among 25 proposals submitted to NASA in August 2002 in response to the Mars Scout 2002 Announcement of Opportunity. Each will receive up to $500,000 to conduct a six-month implementation feasibility study focused on cost, management and technical plans, including educational outreach and small business involvement.

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Led by NASA Langley, ARES is composed of a team of industry, academia, and national laboratories that have been working for the past three years to prepare traditional aircraft technology for scientific application on Mars.

An ARES one-half scale model recently completed a successful test flight 100,000 feet above the Oregon coast. Attached to a high-altitude balloon, the prototype Mars airplane separated from the balloon, unfolded, and completed a two-hour, pre-programmed flight path. After being released over the Pacific Ocean and flying over 50 miles, a pilot remotely guided the 45-pound, 10-foot wingspan aircraft to a safe landing area during the last five minutes of flight.

The Mars Scout competition is designed to augment or complement, but not duplicate, major missions being planned as part of NASA's Mars Exploration Program or those under development by foreign space agencies. The selected Scout science mission must be ready for launch before December 31, 2007, within a total mission cost cap of $325 million.

The Mars Scout Program is managed by NASA's Jet Propulsion Laboratory, Pasadena, Calif., for the Office of Space Science, Washington.

For more information on NASA Langley's ARES program:

http://marsairplane.larc.nasa.gov/

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ARES Team Members:
An international team of university and NASA scientists developed the ARES science concept. ARES science team members include

- •Dr. Joel S. Levine, Principal Investigator (PI), NASA Langley Research Center
- •Dr. Diana S. Blaney, Co-Investigator (Co-I) and Project Scientist, Jet Propulsion Laboratory
- •Dr. John E.P. Connerney, Co-I, NASA Goddard Space Flight Center
- •Dr. Ronald Greeley, Co-I, Arizona State University
- •Dr. James W. Head III, Co-I, Brown University
- •Dr. John H. Hoffman, Co-I, University of Texas, Dallas
- •Dr. Bruce M. Jakosky, Co-I, University of Colorado
- •Dr. Christopher P. McKay, Co-I, NASA Ames Research Center
- •Dr. Christophe Sotin, Co-I, Nantes University, France
- •Dr. Michael E. Summers, Co-I, George Mason University

ARES mission implementation partners include the Jet Propulsion Laboratory, Lockheed Martin Astronautics, Aurora Flight Sciences Corporation, and the Charles Draper Stark Laboratory.